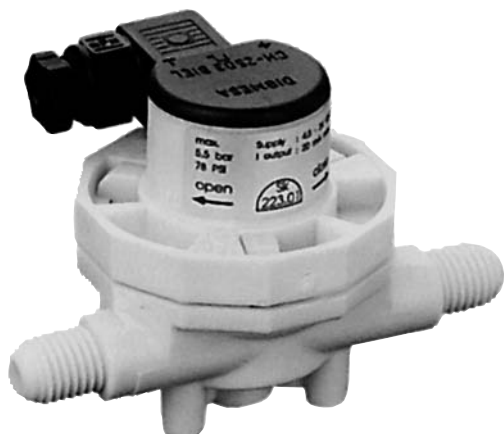


TURBINE FLOW-METRE FFG



- Totalization and low flow rate measurements
- Compact device
- Construction in PVDF, Polysulfon or Arnite
- Easy dismantling
- Ranges: 6 to 720 L/h
- Accuracy $\pm 1\%$ full scale
- Output: frequency signal
- Process connection BSP 1/4"

PRINCIPLE

A PVDF turbine with PTFE axis rotates proportionally to the fluid speed. The fluid is injected through an injector of various diameters to allow different ranges.

Permanent magnets are inserted in the turbine to actuate a Hall Effect sensor.

A frequency-squared signal is proportional to the fluid speed and to the real flow rate.

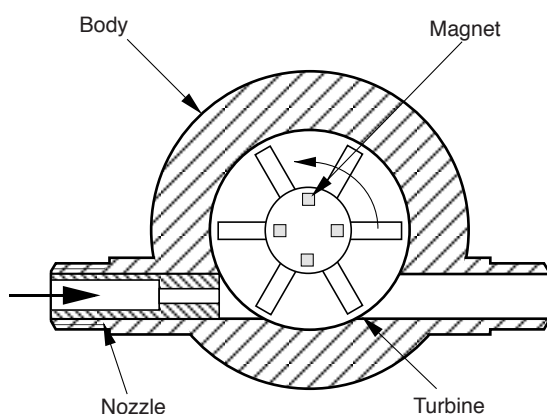
APPLICATIONS

Designed for low flow rates, the FFG flow metre is reliable in all industries for neutral or very aggressive liquids.

The FFG accepts no crystallizing fluids and without particles. It is better to install a filter before the flow metre.

TECHNICAL FEATURES

Range:	6 to 720 L/h (water at 20°C), depending of nozzle diameter
Accuracy:	$\pm 1\%$ full scale for 1:10 ratio range $\pm 2\%$ full scale for 1:25 ratio range
Repeatability:	> 0.25 %
Temperature:	Ambient 0 ... +40°C
Pressure:	vs. temperature, see the drawing
Viscosity:	0.2 to 20 cSt
Housing:	PVDF, Polysulfon or Arnite (PBT)
Turbine:	PVDF
Nozzle:	PTFE
Turbine axis:	PCTFE
O-ring:	FPM
Power input:	5 to 24 V DC
Consumption:	5 to 13 mA as a maximum
Output signal:	NPN collector – Signal load, max. 20 mA
Connection:	IP65, DIN 43650 connector
Cable:	3 x 0.75 mm ² shielded - max. length: 100 meters 3 x 0.75 mm ² without shield - max. length: 30 meters
Process connection:	BSP 1/4"
Weight:	185 g



BAMO MESURES

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**TURBINE FLOW-METRE
FFG**

09-01-2012

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DEB

784-01/1

CODE NUMBERS AND REFERENCES

Code	Housing material	Reference
784 406	Arnite	FFG - 6 / A
784 506	Polysulfon	FFG 6 / PSU
784 606	PVDF	FFG 6 / PVDF
784 101	PVC connections 1/4" GM x 16 to glue on site	

Injector		range* L/h	Signal** pulse /L
Code	Ø mm		
784 001	Ø 1 PTFE	6 - 35	4700
784 002	Ø 2 PTFE	18 - 140	2000
784 003	Ø 3 PTFE	30 - 200	1140
784 004	Ø 4 PTFE	50 - 300	670
	Ø 6 (Housing)	150 - 720	330

* Maximal flow rates are indicative with a pressure loss of 1 bar (approximately).

Over flow is possible but the pressure loss increases as the square flow rate.

** Approximately. .

MONITORS

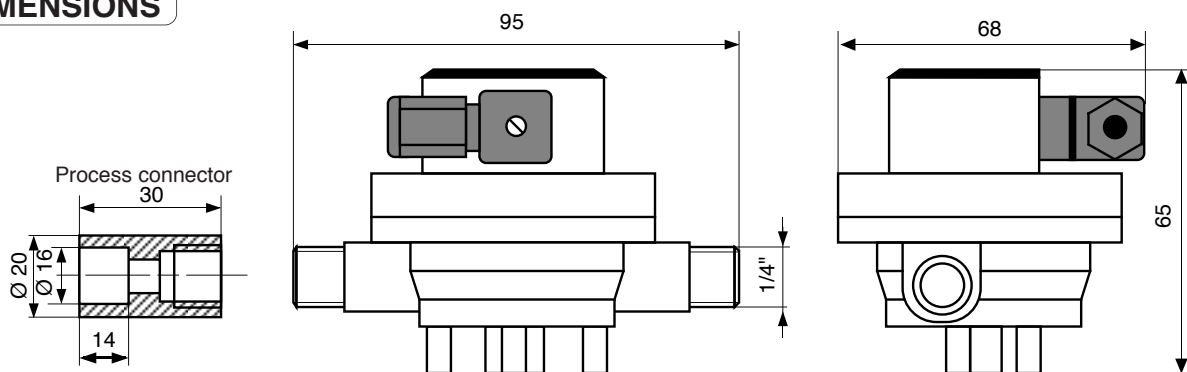
BIF 6040: Rate / Totalization Indicator, with switch options and analogical output (see documentation 282).

BCP 48: programmable counter with 2 adjustable settings (see documentation 289).

BAMOTOP 281: frequency converter, 0-2-5/10 V or 0-4/20 mA (see documentation 281).

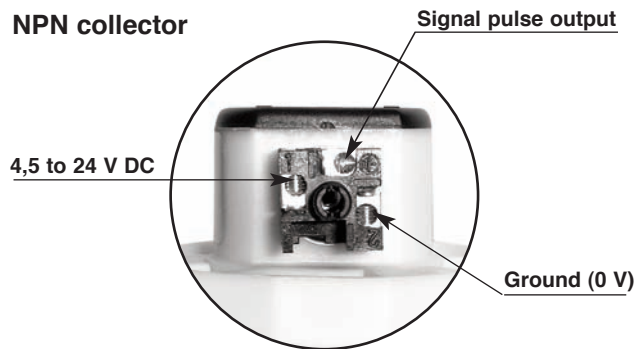
All electronic monitors include a power supply output for the sensor.

DIMENSIONS

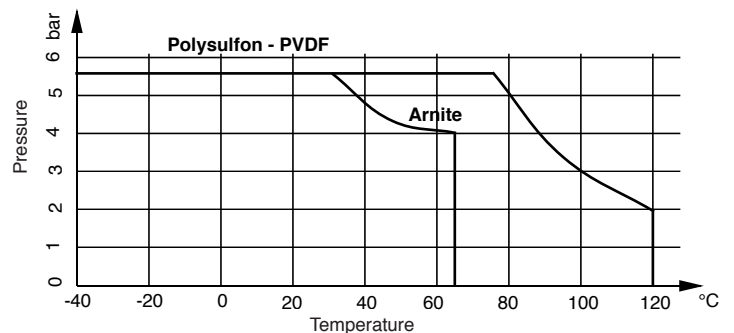


WIRING

NPN collector



PRESSURE / TEMPERATURE DIAGRAM



MOUNTING

- The sensor could be mounted in all positions.
To obtain a precise and reliable measurement it has to be preferably installed horizontally with its electronic housing above.
- Install a filter upstream to avoid entry of particles and turbine blocking.
- When an injector is in use, check the flow: first through the injector.
- Install the sensor on a straight pipe length of 150 mm upstream and 50 mm downstream to minimize turbulences effect.
To assure a good measurement quality, the flow must be homogeneous and the pipe always full.
- The BAMO FFG flow-meter is not appropriate for gas flow-rate measurement.

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